



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,309	01/16/2002	Joshua M. Cobb	83866NAB	8719

7590 01/27/2004

Milton S. Sales
Patent Legal Staff
Eastman Kodak Company
343 State Street
Rochester, NY 14650-2201

EXAMINER

KOVAL, MELISSA J

ART UNIT	PAPER NUMBER
----------	--------------

2851

DATE MAILED: 01/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,309

Applicant(s)

COBB, JOSHUA M.

Examiner

Melissa J Koval

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-27 and 29-75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9, 11-27, 29-48, 61-72 and 75 is/are allowed.
- 6) ☒ Claim(s) 49-55, 57-60, 73 and 74 is/are rejected.
- 7) ☒ Claim(s) 56 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s) _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

DETAILED ACTION

Allowable Subject Matter

Claims 1-9, 11-27, 29-48, 61-72, and 75 are allowed.

Claim 56 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 49, 51, 54, 55, 57, 59, 73 and 74 are rejected under 35 U.S.C. 102(e) as being anticipated by Mihara.

Refer to Figure 1 of Mihara, for example.

Claim 49 sets forth: "A projection apparatus comprising:

a first light source having a first wavelength (laser source 206R);

a first spatial light modulator for modulating incident light from said first light source to form a first image (light valve 201R);

Art Unit: 2851

a first relay lens for focusing and relaying said first image (convergence lens 203R);

a second light source having a second wavelength (laser source 206G);

a second spatial light modulator for modulating incident light from said second light source to form a second image (light valve 201G);

a second relay lens for focusing and relaying said second image (convergence lens 203G);

a third light source having a third wavelength (laser source 206B);

a third spatial light modulator for modulating incident light from said second light source to form a third image (light valve 201B);

a third relay lens for focusing and relaying said third image (convergence lens 203B);

a dichroic combiner which forms multicolor images by combining said first, second, and third images (synthesizer prism 101); and

a projection lens for projecting said multicolor image (projection lens member 100)".

With respect to claim 51, refer to column 4, lines 48 and 49.

With respect to claim 54, again refer to laser sources 206R, 206G and 206B.

With respect to claim 55, refer to column 4, lines 55 through 58.

With respect to claims 57 and 59, refer to synthesizer prism 101.

Claims 73 and 74 are met for the same reasons already applied to claim 49.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 50, 53 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mihara in view of Cipolla et al.

Mihara shows all of the elements set forth with respect to claim 50 (refer to the rejection of claim 49 under 35 USC 102(e) as anticipated by Mihara above), except for a reflective LCD. Such devices are well known in the art for use as spatial light modulators as shown by Cipolla et al. in their three color system that is analagous to that shown by Mihara. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt Mihara's system for either reflective or transmissive spatial light modulators. The motivation for one having ordinary skill in the art to use either type would have been an obvious matter of design choice.

With respect to claim 53, Mihara makes use of three lasers or LEDs. Although either lasers or LEDs might be described as lamps, Cipolla et al. show white light source 12, such as a metal halide arc lamp for use in a three color system. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt Mihara's system for use with a traditional lamp or lamps. The motivation for one having ordinary skill in the art to use one light source over another

Art Unit: 2851

would have been an obvious matter of design choice. Variations on light sources for three color systems are well known in the art.

With respect to claim 60, neither Mihara nor Cipolla et al. specify if the image formed by their respective dichroic combiner means may be virtual, however it is not clear how changes in location of the focal point of the image distinguishes over the prior art of record.

Claims 52 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mihara in view of Cipolla et al. and further in view of Mukawa et al.

Neither Mihara or Cipolla et al. specifically teach the use of digital micromirror devices. With respect to claim 52, digital micromirror devices are well known in the art as shown by Mukawa et al. See DMD 43. It is not clear how the replacement of a DMD for either a reflective or a transmissive LCD patentably distinguishes the claim over the prior art of record. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use any of the claimed devices as an obvious matter of design choice.

The same argument applies to the replacement of any of the previously discussed light sources in the above rejections by means of a color filter (see color wheel 40 of Figure 6 of Mukawa et al.), or and the replacement of an X-prism by means of the replacement of Philips prism of claim 58. All of said devices are well known in the art for use in three-color systems.

Response to Arguments

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., applicant's arguments are directed to magnification. Claims 49-55, 57- 60, 73 and 74 are not directed to magnification and neither the term "magnifying" nor "magnification" appears in the claim language.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

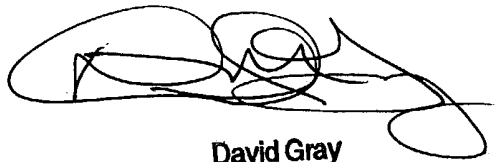
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2851

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa J Koval whose telephone number is (703) 308-4801 or (571) 272-2121 after January 30, 2004. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell Adams can be reached on Monday through Thursday at (703) 308-2847 or (571) 272-2112 after January 30, 2004. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



David Gray
Primary Examiner

MJK